AMYOTROPHIC LATERAL SCLEROSIS (ALS)

ALS is a fatal, neurodegenerative disease[1]

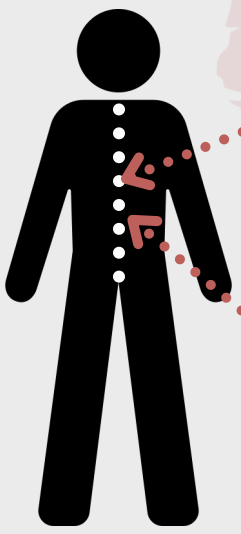
"a" = no **"myo"** = muscle

It is also known as Lou Gehrig's Disease or motor neuron disease[1]

ALS deteriorates the motor neurons in the brain and spinal cord.[2]

People with ALS often lose the ability to function, speak, swallow and breathe.[3]

ALS strikes women and men of all ages and is not commonly found in specific racial, ethnic or socioeconomic boundaries.[4]

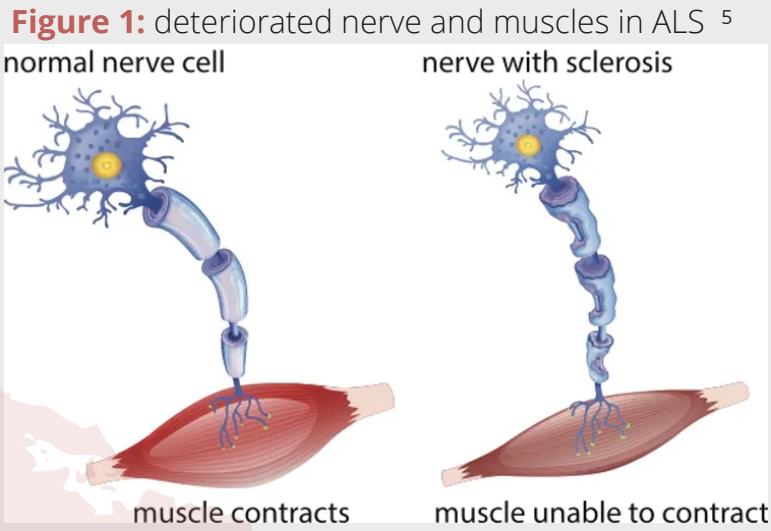


"trophic" = nourishment[4]

"lateral" is the area of the spine where brain tells the muscles what to do[4]

"sclerosis" is hardening, as the disease progresses, the lateral areas harden and the signals stop[4]

Figure 1: deteriorated nerve and muscles in ALS [5]



Symptoms:

Progressive loss of muscle control[1]

- ALS Gradually prohibits the ability to
  - Speak[1]
  - Swallow[1]
  - Walk[1]
  - Grasp objects[1]
  - Move[1]
  - Breathe[1]

FACTS

5000+

people are diagnosed each year [6]

2-5 years

average life expectancy [6]

2x

War veterans are 2x likely to get ALS [3]

Diagnosis

ALS is difficult to diagnose

- ALS is often diagnosed by ruling out other diseases, which can take months or years.

10%+

of cases are familial (inherited through mutated genes) [7]

90%+

are sporadic (occurs randomly) [7]

Treatment

Only **4 drugs**

are approved by the U.S. FDA to treat ALS. This includes:

- Riluzole[2]
- Nuedexta[4]
- Radicava[2]
- Tiglutik[3]

Current Research:

- Combination therapy: Sodium phenylbutyrate and taurursodiol
  - has reduced neuron degeneration in the clinical trial[8]
  - expected to improve life expectancy and patient outcomes[8]
- Mastinib drug
  - still in works as an add-on therapy to Riluzole[9]
  - expected to improve functionality and life expectancy[9]

There is NO CURE for ALS[2]